PATENT ABSTRACTS OF JAPAN

(54) INFORMATION PROVIDING SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide information in a configuration optimized for each user and to select and display a part of contents.

SOLUTION: An information providing server makes access to a site designated by the user (PR1)and obtains configuration information (PR2). The whole of contents such as a top page is dissolved into row units (PR3)and a row selection screen is produced (PR4). Only the contents of the row selected by the user are drawn to be offered (PR5). In this wayunnecessary information is removedand a limited screen area can be used effectively.

CLAIMS

[Claim(s)]

[Claim 1]An information service system which integrates two or more information which is provided with the following and characterized by constituting said each offer-of-information part so that offer of only partial information selected among each part minute information included in said each information is possibleand which a user chose and with which this user is provided.

Two or more information acquisition sections which acquire information from sources of informationrespectively.

Two or more offer-of-information parts which provide said acquired each informationrespectively.

An integrated management means on which said each offer-of-information part is integrated and displayed.

[Claim 2]The information service system according to claim 1 which as for said each offer-of-information part is constituted so that offer of only partial information selected among each part minute information included in said acquired each information is possible.

[Claim 3]The information service system according to claim 1 with which said each information acquisition section acquires only said selected each part minute information from said sources of information.

[Claim 4]The information service system according to claim 1 provided with a partial information selecting part for said each offer-of-information part to choose said partial information providedrespectively.

[Claim 5]The information service system according to any one of claims 1 to 4 in which said each part minute information is what extracts said information in a predetermined unit.

[Claim 6]The information service system according to claim 5 in which said predetermined unit is a line unit.

[Claim 7]Inside of said acquired information which said each offer-of-information part providesrespectivelyor said selected each part minute informationProvide a

selecting part for a predetermined inspection which chooses information and partial information for perusing under predetermined inspection environment in said each offer-of-information partrespectivelyand said each offer-of-information partThe information service system according to any one of claims 1 to 6 which provides said information and partial information with said selected selecting part for a predetermined inspection with a gestalt suitable for said predetermined inspection environment.

[Claim 8]The information service system according to claim 7 in which said predetermined inspection environment is the mobile communication environment to which inspection screen size was restricted.

[Claim 9]When a certification information management tool which manages certification information is established and said sources of information require attestationThe information service system according to any one of claims 1 to 8 which acquires information from said sources of information when said each information acquisition section generates a request which includes certification information with reference to said certification information management tool.

[Claim 10]In a program for integrating two or more information which a user choseand providing for this userA program for realizing a function to make information acquire from sources of informationa function as which any one or two or more partial information are made to choose among each part minute information included in said acquired informationand a function to make said selected partial information provide via an offer-of-information parton a computer.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the information service system which provides each user with various information from the server placed on

communication networkssuch as the Internet and intranetfor example.

[0002]

[Description of the Prior Art]The user can acquire various information now from on a network via information inspection software typically like a web browser with progress of the computer communication network and personal computer which are represented by the Internet etc. The user can raise the productivity of intellectual labor greatly by the thing which was accumulated on the network and which use various knowledge data effectively variously. By using not only knowledge data but an electronic commerce system (EC)the user can purchase various ticketssuch as an airline ticketon-lineor can move deposit of a bank accountfor example.

[0003]By the wayunder multitasking OStwo or more application programssuch as a web browser (there is restriction of an available computer resource with each client machine)a mail clientand an electronic commerce systemcan be started. For this reasonin order for required information to come to hand or to conduct required dealingsa user will start two or more application programsand will perform predetermined operation within each application.

[0004]On the display of the client machine which a user usesthe user interface of many application programs will openso that a user arranges two or more work in parallel and performs it. In order that each application may move independently mutuallyeach user interface is also mutually developed on a display independently. The user has to discover and operate a required thing from the user interface developed disorderlyand the productivity of intellectual laboretc. fall.

[0005]Under distributed network environmentsince various knowledge data are produced every moment and accumulated in every placeknowledge data distribute and flow to every place. There is no guarantee in particular it is useful and is continued in the intense field of change even if the site which was sources of information useful till yesterday continues for the future. Thereforethe user who searches for the newest useful information always needs to evaluate the

usefulness of sources of informationand needs to update a site address
(URL:Uniform Resource Locator) etc.

[0006]Thusalthough development of distributed network environment and
personal computer art contributed in respect of production of
informationcirculationetc.the disorderly information overload state is also
produced simultaneously.

Each user became difficult [it / for the information which he wants to come to
handwhen required].

[0007]Thenthe service called what is called an "Internet portal" was born. It is
understood as the Internet portal as a website which also doubles various
informationincluding a sportentertainmentsscienceetc.by which the genre division
was carried out beforehandand generally provides a search engine also in a core.
Although the early Internet portal provided the same service to all the usersIn the
improved Internet portalefforts to provide service (for exampleit provides for the
user who likes a sport focusing on sport-related information) suitable for each
userrespectively are made.

[0008]In recent yearsthe information consolidation service called an enterprise
information portal (EIP:Enterprise Information Portal) is also provided. An
enterprise information portal integrates the information which exists within and
without a certain company and organizationandgenerallyprovides it by the
organization optimized for every constituent.

[0009]

[Problem(s) to be Solved by the Invention]The Internet portal and enterprise
information portal which were improved are prepared for every userand since the
information composed per everybody can be providedthey provide the user with
one useful means for managing information under the environment of information
overloadas mentioned above.

[0010]Howeveralthough composed for every userwhen the information selected
according to each user's tastean attributeetc. by the administrator side is

providedchange of each user's intellectual curiosity cannot be followed promptlybut it is user-unfriendly for a user. For exampleprovide with horticulture the user who considers it as a hobby focusing on horticulture pertinent informationor. Sell to the employee of a sales department and Or the graph of transitiona supplier lista customer listAlthough the information property as an organization and the target sharing have a value in the fixed and mechanical uniform service according to the attribute etc. of each user who provides new product news etc.it is far from effective use of the information based on each user's spontaneity.

[0011]The information accumulated on the network is a huge quantityand since information is newly produced every dayit is difficult to choose the optimal information by the administrator side for every userto extract only required informationand to provide for each user.

[0012]Even when sources of information are limited to some extent temporarilyin order to extract and provide only required information for a user among various kinds of information which sources of information provideThe program etc. which choose information suitable for a user from the information which specifies sources of information for every userand sources of information provide must be preparedand the control of maintenance also takes time and effort very much.

[0013]Even when selection of information is left to each usersince there is a limit in scope sizeit is based on quantity of informationdisplay size per informationetc. to displaybut it is difficult to display all the required information at once.

[0014]Although based also on the kind of information which sources of information provideit is not a reason which needs each whole information a user expects acquisition. For exampleif a news web site (WWW server which can peruse a report) is mentioned as an examplethe single report will not necessarily be published by the top page equivalent to the 1st page of a newspaperandusually size doubling ****** of the various reports will be carried out. What is necessary is just to display the whole top pagewhen all the reports published by the top page are required for a user. Howeverif it displays the whole

top page also when you need only some reportsuseless information will occupy the limited screen.

[0015]If all the information that includes required information only in the part has been arranged to the display screenit is hard to peruse the information needed trulyand user-unfriendly.

[0016]On the other handin recent yearsa network is accessed via the small information terminal which can carry a cellular phonea Personal Digital Assistantetc.and the case which acquires desired information is increasing. It is a gestalt called what is called "mobile computing." To acquire and peruse desired information using such a small information terminalit is necessary to care about the following points.

[0017]One is a problem of hour corresponding. Generallyat mobile communicationsit is difficult to maintain the stable communication connection for a long timeand since communication cost also increasesit is necessary to access the target information as much as possible for a short time. Other one is a problem of restrictions of screen size. In order "to carry"the size of a small information terminal receives restriction. Inevitablythe screen size is also miniaturized. In today when a disk top type personal computer is provided with a display (17 inches - 21 inches)the display sizes of a small information terminal are at most 6 inches - about 9 inches. In the case of a smaller terminal like a cellular phone or a Personal Digital Assistantit has only a 2 or about 3-inch display.

[0018]In order to access the target information promptlythe use of an information portal mentioned above is convenientbut since screen size is smalla limit is among the amount of information which can be displayed. Thereforeit is necessary to choose only information required much more precisely at the time of mobile communications.

[0019]The 3rd feature exists in the information inspection by mobile communications in addition to the above. It is the point that the information to be used is also different according to a user's movement destination. For

examplewhen the case where a businessman takes an official trip to a local city is mentioned as an examplethe information about an in-house product or competitive products is information with an area important unrelated always in which he is located. Howevera weather reporttraffic informationetc. which cover his place of business reduce value relatively by his movement. It is because information required for the businessman of a business trip destination is not the information about the weather and the traffic congestion of place of business but information about the weather and transportation condition of a business trip destination.

[0020]this invention is made in view of the above-mentioned technical problemand comes out. The purpose is to eliminate inner unnecessary information and to provide the information service system which can provide only the information which each user needs.

There are other purposes of this invention in providing the information service system which chooses useful information easily and enabled it to perform optimal organizationeven when receiving restriction in inspection environment. The further purpose of this invention will become clear from the embodiment mentioned later.

[0021]

[Means for Solving the Problem]In order to solve an aforementioned problemnot only a certain whole information but its information is chosen selectivelyand it enables it to display it in an information service system concerning this invention.

[0022]Namelytwo or more information acquisition sections which an information service system concerning this invention integrates two or more information which a user choseprovide a user with itand acquire information from sources of informationrespectivelyIt has two or more offer-of-information parts which provide acquired each informationrespectivelyand an integrated management means on which each offer-of-information part is integrated and displayedand each offer-of-information part is constituted so that offer of only partial information selected among each part minute information included in each information is possible.

[0023]Hereintegrating two or more informationmeans that a single user interface arranges various kinds of informationand it provides rather than displays information using a separate user interface for every application program. As "sources of information"a WWW (World-Wide Web) server etc. which provide a texta pictureetc. are mentionedfor example. An information acquisition section is provided with a protocol required to acquire information from sources of information etc.and acquired information is passed and displayed on an offer-of-information part. An information acquisition section and the offer-of-information part do not need to correspond by the couple 1. An integrated management means manages a display of each offer-of-information part integrative. That isthe offer-of-information parts which exist in the same screen interfere mutuallyor the whole layout is adjusted so that it may not be overlapped and displayed.

[0024]For example like two or more part contents (each reporta pictureetc.) which constitute a certain web pagepartial information included in each informationis information included in informationand is the part substance of ** which makes a certain settled meaningor the bank. If one information may comprise single substanceit may be constituted as a set of two or more substance (partial information). When a certain information consists of two or more partial informationonly selected information can be displayed via an offer-of-information part.

[0025]Each offer-of-information part comprises a suitable embodiment so that offer of only partial information selected among each part minute information included in each acquired information is possible.

[0026]That isalthough an information acquisition section acquires the whole informationan offer-of-information part displays only partial information selected among acquired information.

[0027]On the contraryeach information acquisition section may be constituted so that only selected each part minute information may be acquired from sources of information.

[0028]According to a suitable embodimenteach offer-of-information part is

provided with a partial information selecting part for choosing partial information providedrespectively.

[0029]The user can choose desired partial information via a selecting part.

[0030]Hereeach part minute information becomes unable to extract information in a predetermined unitand can extract it per linefor example.

[0031]As a predetermined unita title unita front unitetc. can be mentionedfor example in addition to a line unit. By decomposing information for every line and supposing that it is selectabledesired information can be chosen more precisely.

[0032]When extracting partial information per linelow partial information of utility valuesuch as an updating date of informationmay also be extractedfor examplebut scarce partial information of such utility value is no longer displayed by removing from selection. On the other handalthough a possibility that scarce partial information of utility value will mix can be reduced when extracting partial information per title etc.valuable partial information may leak from extraction. A prescribed unit which extracts partial information can be suitably set up from the above viewpoints etc. Each user may enable it to change a prescribed unit freely himselfand may be made to use it combining two or more units (a linea titleetc.).

[0033]According to a suitable embodimenta selecting part for a predetermined inspection which chooses information and partial information for perusing under predetermined inspection environment among acquired information which each offer-of-information part providesrespectivelyor selected each part minute information is provided in each offer-of-information partrespectively. And each offer-of-information part is constituted so that information and partial information with a selected selecting part for a predetermined inspection may be provided with a gestalt suitable for predetermined inspection environment.

[0034]As "predetermined inspection environment"mobile communication environment to which inspection screen size was restricted can be mentioned.

[0035]Only information used under environment where inspection screen size was restricted among two or more acquired information (partial information is included) is chosen by a selecting part for a predetermined inspection.

Therebyfor example under mobile communication environment which uses a small information terminalrequired information can be accessed promptly.

[0036]In a suitable embodimentwhen a certification information management tool which manages certification information is established and sources of information require attestationeach information acquisition section acquires information from sources of information by generating a request which includes certification information with reference to a certification information management tool.

[0037]Therebythe user should just log in to an information service system onceand attests by each information acquisition section executing by proxy to each required sources of information of attestation. here -- being careful -- not attestation vicarious execution but an information acquisition section by Cookie which is known conventionally are a point which generates a request included certification information.

[0038]

[Embodiment of the Invention]Hereafterbased on <u>drawing 1</u> - <u>drawing 15</u>an embodiment of the invention is explained in full detail. <u>Drawing 1</u> - <u>drawing 12</u> are the drawings concerning a 1st embodiment of this invention. <u>Drawing 1</u> is a composition explanatory view showing the whole information service system outline concerning this embodiment.

[0039]The offer-of-information server 1 which unifies and provides several different information is a WWW server which presents the information individualized for every user according to the request from the client program 21 which works on the client machine 20.

[0040]Hereas the client machine 20a personal computera workstationa Personal Digital Assistant (a cellular phone is included)etc. can be mentionedfor example. As the client program 21the web browser which transmits and receives information with a HTTP (Hyper Text Transfer Protocol) protocol etc. is used suitablyfor example (a client program is hereafter called a web browser). Howeveran HTTP protocol and a web browser are examples and this invention is not limited to this.

[0041]Each user only accesses the offer-of-information server 1and does not need to open the web browser 21 for every WWW server like [it is available in all the required informationand] before. This offer-of-information server 1 realizes what is called a single access point of providing all information required of access to one place. The information provided from the offer-of-information server 1 is displayed on the web browser 21 as the offer-of-information screen 30. The composition of the offer-of-information screen 30 is mentioned later.

[0042]The offer-of-information server 1 can provide with and constitute the whole Management Department 2the page control department 3the area Management Department 4the controller Management Department 5the contents adapter 6and the management data base (DB and brief sketch) 7.

[0043]The whole Management Department 2 is equivalent to an "integrated management means"and can manage two or more page control departments 3. A "page control means" and expression are possible for the page control department 3and it is for displaying two or more pages on the offer-of-information screen 30. Two or more area can be set to each page. An "arrangement area management tool" and expression are possible for the area Management Department 4and it is for managing a layout per area. Two or more controllers can be set to each area. An "arrangement frame management tool" and expression are possible for the controller Management Department 5and each controller can manage two or more contents adapters 6. The contents adapter 6 is equivalent to an "information acquisition section"takes the place of the web browser 21and acquires information from various kinds of sources of information 10.

[0044]As the sources of information 10the various application programs (a ticketthe reservation system of stayetc.) on a web page (page which a WWW server provides)and a websitea databaseetc. can be mentionedfor example. The sources of information 10 do not need to exist in the exterior of the offer-of-information server 1and can also be established in the offer-of-information server 1. As sources of information in a servera database in the companyan in-company

documentetc. can be mentionedfor example. An example of the concrete composition of contents adapter 6 grade is mentioned further later.

[0045]Nextdrawing 2 is an explanatory view showing the composition of the offer-of-information screen 30 displayed on the web browser 21.

[0046]The offer-of-information screen 30 is divided roughly into the portion (public area) provided in common with each userand a page. Public area is what presents the eternal information uniformly provided to all the users regardless of each user's attributeIt comprises the common header part (it is also called top area) 31 displayed on the web browser upper partand the menu area 32 displayed on a web browser side edge part. In the top area 31the contents indicators 70such as a service name of the offer-of-information server 1 and a global linkcan be arrangedfor example. Even when a link is followed and it moves by indicating the service name etc. by eternalthe sense of security of working within the offer-of-information server 1 can be given to a user.

[0047]The annunciator part 34 grade for showing the menu area 32 to the change of the 33-page contents indicator which displays User Information can be arranged. It is for the annunciator part 34 changing each page from which it is equivalent to a "selecting part"and a kind differs. As a kind of pagea public page (public P)a user page (user P)and a group page (group P) can be set up. Herea public page is a page provided regardless of the registered user or guest to those [all] that accessed the offer-of-information server 1. A user page is a private page provided to the user (login user) attested with a user namea passwordetc. A group page is a page with which only the specific group who consists of one person or two or more users is provided. Only the user belonging to the group can refer to a group page. A public pagea user pageand the group page can consist of two or more pagesrespectively. In this meaninga public corner can be called for a public page and a user corner and a group page can be recalled for a user page as a group corner etc.

[0048]The page is displayed on the approximately center part of the web browser 21. for examplethe homepage 41 -- the 2nd page of two or more pages can be

set up like 42. When the new page 43 is addedthe tab of a new page is added to the backmost part of the existing page. The addition of a page is mentioned later. [0049]The area which extends along the horizontal direction (transverse direction) of a page to each page can be arranged [two or more] perpendicularly (lengthwise direction). Area corresponds to an "arrangement area." The two area 51 and 52 is illustrated in the figure. Two or more controllers prolonged in the perpendicular direction of a page in each area can be arranged side by side horizontally. A controller corresponds to an "arrangement frame"in the figurethe two controllers 61 and 62 are arranged in the upper area 51and the one controller 63 is arranged in the lower area 52respectively.

[0050]For each controllerone or more contents indicators 70 can be arranged. The contents indicator 70 is equivalent to a "offer-of-information part"and is provided with the title display field 71 and the contents viewing area 72. The controller can arrange two or more contents indicators 70 side by side perpendicularly. The mounting directions mentioned above are examples and this invention is not limited to this. Area is arranged side by side horizontally and it may be made to arrange a controller side by side perpendicularly in area.

[0051]Important points are the point which differs in the controller mounting directions in areaand the mounting directions of the contents indicator within a controllerand a point of following movement of higher rank structure. If area is moved as following movement of higher rank structureall the contents indicators 70 in all the controllers in area and this controller will also move with movement of areaWhen a controller is movedall the contents indicators 70 contained in a controller are also meant as moving together. On the contrarymovement of low rank structure does not affect the position of higher rank structure. That iseven if it moves a controllerthe position of the area where this controller belongs does not change. Mounting directions are changed and a delicate and dynamic layout change is possible by having made low rank structure movable at one. In the following explanationin a figurealthough numerals do not givea page may be named genericallythe page 40and area may be named genericallythe area

50and a controller may be named genericallyand it may be expressed as "the controller 60."

[0052]Nextdrawing 3 is an explanatory view showing the details of a page. The display of the expedient top (on restriction of the size of a drawing) of explanation and drawing 3 and the display of drawing 2 differ a little.

[0053]in drawing 3 -- first -- it should observe -- the control buttons 81-87 for changing a layout etc. into each area 50each controller 60and each contents indicator 70respectively are the points established in one. The "one target" does not need to mean unifying seemingly and each of the area 50the controller 60and the contents indicator 70 does not need to have data of a control button with a natural thing.

[0054]There are the disappearance button 81the lower go button 82the upper go button 83the right translation button 84the left translation button 85the help button 86and the edit button 87 in a control button. The disappearance button 81 extinguishes the object to which it was given. Hereby this embodimentalthough temporary elimination on a display and lasting elimination can be considered as "disappearance"when the disappearance button 81 is operatedthe subject (areaa controllera contents indicator) is eliminated everlastingly. Thereforein order to prevent the mistaken disappearance operation although it is necessary to add anew when a user wishes a display for the second timewhen the disappearance button 81 is operatedthe message which stimulates cautions is displayed.

[0055]Each go buttons 82-85 are for moving the subject in which it was given in the predetermined direction. The go buttons 82-85 are given according to the attribute of a subjecti.e.a movable direction. That issince the contents indicator 70 is perpendicularly arranged within a controllerit has only the lower go button 82 and the upper go button 83and the right translation button 84 and the left translation button 85 are not formed. Similarlythe go button according to each movable direction is provided also in a controller and area.

[0056]The help button 86 is for displaying the help menu beforehand prepared for every application program. The edit button 87 sets up the addition etc. of the

contents displayed on the contents viewing area 72 of the contents indicator 70. Like the after-mentionedthis offer-of-information server 1 is selectively provided with the new feature that contents can be displayednot per the whole contents but per line etc.

[0057]Herethe button set which consists of either or the plurality of the disappearance button 81each go buttons 82-85and the edit button 87 among control buttons corresponds to a "layout operation part"a "frame layout operation part"or a "field layout operation part." The set of the control button set as a subject becomes settled with the characteristic of the information concerning the attribute of a subjector a subjectetc. For examplewhen a certain contents indicator 70 is what displays a web pagethe edit button 87 is contained in the control button set formed in this contents indicator 70and it gets. Howeverthe control button set which does not contain the edit button 87 is set to another contents indicator 70 which displays the contents which can perform neither edit nor setting out.

[0058]As no control button set can be formed in the contents indicator 70 in public areathe unific appearance of public area and composition can be maintained to itand in itit can constitute so that public contents common to All Users may certainly be provided. Namelya layout operation part is not set to the shared area (public area and public page) which arranges the share contents provided in common with each userit can constitute so that a layout operation part may be set only to the individual field (a user page and a group page) with which each user (a group is included) of every is provided.

[0059]When drawing 3 is observeda page understands that the page addition button 91the page deletion button 92the area addition button 93the controller addition button 94the contents addition button 95and the page go button 96 are formed in the positionrespectively. The icon display of each buttons 91-96 does not have to be carried outand they may be displayed like a text link button.

[0060]The page addition button 91 is for adding a new page. The page deletion button 92 is for deleting a page. Page deletion is not permitted to all pages. Only

those who acquire manager authority are allowed deletion of a page like a public page or a group page shared. Even if it is a user individual's pagethe page [1st] homepage can be set as deletion impossible.

[0061]The area addition button 93 is for adding new area in a page. New area is added to the prescribed position of the bottom of a pageetc.for example. The controller addition button 94 is for adding a new controller in area. Thereforethe controller addition button 94 is formed for every area. But when area and a controller are hidden by the normal state and it shifts to layout editing mode so that it may mention later with drawing 9it is also possible to display existence of area and a controller.

[0062]The contents addition button 95 is for adding new contents in a controllerand is provided in each controller. The page go button 96 moves a page and consists of the right translation button 84 and the left translation button 85. Although the portion which attached the numerals 96 is a portion which displays "page movement"it is used as the expedient top of explanationand the page go button 96. The numerals 96 are not operated but page order changes with go buttons 85 and 84 on either side forward and backward actually.

[0063]Nextbased on the explanatory view of drawing 4 and drawing 5the structure of each data table managed by the management data base 7 is explained.

[0064]Drawing 4 (a) is a table which manages User Information. The User Information table matches each user name and the page identification number (following ID) which specifies the page which each user holdsfor exampleand is held. Hereit is given for every individualand also a user name is given for every group. In order to manage the public page which a guest can also refer tothe user name for guests is also set up. The page which a user holds means the page with which the user is provided. "PID 13and 6" means that each page specified by PID1PID3and PID6 to the user U1 is provided.

[0065]Drawing 4 (b) is a table which manages the constitution data in a page. The page data table matches and holds page IDa user namea page titleand area

datafor example. Area data is data in which the area set up in the page and a controller are shown. For examplealthough indicated as "A1 [12]A2 [3]" to the area data of PID1It means that two areathe area A1 and the area A2is set up into the page as which this is specified by PID1and the area A1 has controller CID1 and controller CID2and the area A2 has controller CID3. Thereforeif a page data table is referred tothe outline layout (area and controller) of the page can be known.

[0066]Drawing 4 (c) is a table which manages a controller. The controller data table matches and holds controller ID (CID)the user namethe affiliation pageand the object ID listfor example. An object ID list is a list of [for specifying the contents indicator 70 displayed in a controller] (it is a list of [for specifying the contents displayed correctly]).

[0067]Drawing 4 (d) is a table which manages the data of an object. The object data table matches and holds object ID (OID)a user namean affiliation pageaffiliation controller IDand an object kindfor example.

[0068]Drawing 5 (a) is a table which manages authentication data. The data demanded on the occasion of contents usefor examplea user name and a passwordis matched with an attestation data tableand it is held. An attestation data table is equivalent to a "certification information management tool."

[0069]The contents adapter 6 generates the request (for exampleHTTP request) included certification information (a user name and a password) with reference to an attestation data tableand transmits to the sources of information 10 (website) which require attestation. If it sees from the sources of information 10distinction of whether for the offer-of-information server 1 to have executed by proxy whether a user's client machine 20 would have accessedand to have accessed will not be attached. The sources of information 10 distribute information according to a user's (contents adapter's) demandwhen it distinguishes that authenticating processing is completed and he is a registered user. here -- being careful -- when the contents adapter 6 generates the request included certification informationit is the point that attestation vicarious execution is

performed. This is different although the art called what is called Cookie is used in the single sign-on art known conventionally. Cookie art is for a server to identify each clientand a client replies the file (ticket) which wrote in certification information according to the demand from a server. In order to introduce Cookie art into a client/server systemit is necessary to constitute the server side program so that the existence of Cookie may be askedand to set up in a client side receive and hold Cookie. It is not necessary to hold Cookieand contrary to thisby this inventionsince the contents adapter 6 generates each time the request included certification informationeven if it is when un-**** [the server side program of each sources of information 10 / Cookie]attestation can be executed by proxy.

[0070]Herehow to provide the information customized for every user is briefly described using said each table. When the user U1 accessesthis user is distinguished as a guest at the time before loginand a public page is provided. If a user logs inthe whole offer-of-information server 1 Management Department 2 will recognize as the user U1. According to the User Information tablethe page which the user U1 holds is 3 pages of PID 13and 6. Explanation is continued paying attention to PID1 [page / 1st].

[0071]Nextreference of a page data table sets the two area A1 and A2 to the page of PID1. ID of the controller which each holds is matched with each area A1 and A2respectively (in CIDs 1 and 2in the area A1CID3 is to the area A2). Thena controller data table is referred to. For exampleCID1 holds three object OID1and 2 and 3. Each object can be drawn and can make it display by referring to an object data table. Thusa page can be drawn and provided for every user by referring to each hierarchized table one by one.

[0072]Nextdrawing 6 is an explanatory view showing how to choose contents selectively and to display them. For examplethe new contents indicator 70 is generatedwhen choosing a web page as this contents indicator 70 selectively and displaying it on itthe edit button 87 of the contents indicator 70 is operatedand URL of a web page is specified. The contents adapter 6

corresponding to the contents indicator 70 accesses the web page page 10 of the specified site (PR1)and acquires the configuration information 10A on the specified web page (PR2). As configuration informationa source codea style sheetetc. which were written by Page Description Languagessuch as HTML and XML (eXtensible Mark-up Language)can be mentionedfor example.

[0073]And configuration information is analyzed (PR3)the menu of a line unit is generated from a web pageand a user is shown (PR4). For exampleby analyzing tagssuch as a line feed tag <BR> and a table tag <TD>whole contents called a web page are decomposed into the partial contents of a line unitand a user is shown as a line selection picture. A user chooses only that for which it asks out of two or more enumerated lines. When a user's selection is completedthe contents adapter 6 draws only the contents of the selected lineand is made to display them on the contents indicator 70 (PR5).

[0074]Therebyas shown in drawing 6top newsand a "stock price" with the selected user are displayed on the contents indicator 70 among whole contents called the top page of "Ox news web site"for example. Other contents linked to the displayed contents can be displayed by following a link within the contents indicator 70. Thussince only desired contents are extracted selectively and can be displayed from a contents aggregateit becomes much more personalization-ization customizable and information can be provided by the organization optimized for every user.

[0075]Although the case where it extracted per line as a partial example of extraction of contents was illustratedthis invention is not limited to this. By changing the method of structural analysison various units and a levelcontents can be extracted selectively and can be displayed. For examplecontents can also be extracted per title and it can also extract per theme. Since structure more detailed than HTML is possible for XMLin the unit except mentioning hereit can choose contents selectively and can display them. It can also constitute so that it may extract combining a title etc. and a line.

[0076]Nextthe outline of layout change is explained with reference to drawing 7 -

drawing 9. Drawing 7 shows the case where the position of the contents indicator 70 is changed. Drawing 7 (a) shows layout change before of the contents indicator 70and drawing 7 (b) shows the layout change back.

[0077]As shown in drawing 7 (a)the lower contents indicator 70 shows the contents CB. When a user wants to arrange to the up side which is easy to recognize the contents CB visuallya user operates the upper go button 83 provided in the lower contents indicator 70. Operation of the upper go button 83 is detected as an eventandtherebythe layout information in the controller 61 is rewritten. As a resultas shown in drawing 7 (b)the contents CB are displayed on the upper part and contents CA is displayed on the bottom. here -- being careful -- it is the point that exchange of the contents indicator 70 is performedwithout moving to another pagessuch as a page style selection menu. The arrangement is changed while each contents indicator 70 had displayed each contents CA and CB.

[0078]Nextdrawing 8 is an explanatory view in the case of changing the layout of a controller. Drawing 8 (a) shows layout change beforeand drawing 8 (b) shows the layout change backrespectively. When moving the left-hand side controller 61 to right-hand side as shown in drawing 8 (a) for examplethe user should just operate the right translation button 84 provided in the controller 61. If operation of the right translation button 84 is detectedthe layout information of the area 51 will be rewrittenand as shown in drawing 8 (b)it will be reflected as right translation of the controller 61. The controller 61 takes all the contents indicators 70 belonging to self with itand moves together.

[0079]Drawing 9 is an explanatory view in the case of changing the layout of area. As shown in drawing 9 (a)in the usual stateexistence of the area 51 is hidden from the user. That iseach button for operating the linearea nameand area which show the boundary of area is not displayed.

[0080]The user who wishes layout change of area operates the layout editing button 97 illustrated by the bottom in drawing 9 (a). Operation of the layout editing button 97 will display an area namea boundary lineand the various

buttons 81-83as shown in drawing 9 (b). The user can change the layout of the area 51 now by operating each buttons 81-83 suitably. here -- being careful -- the layout editing button 97 is a changeover switch for enabling detailed layout changeand is a point which is not for making it shift to another pagessuch as a layout editing screen. The layout editing button 97 by this embodiment guarantees a seamless layout changewithout interrupting the display of each contents indicator 70.

[0081]Nextoperation of this invention is explained based on drawing 10 - drawing 12. The flow chart to illustrate shows the outline of the flow of processing or operationand is different from a actual program structure in respect of versatility. Hereaftera step is written as "S."

[0082]Drawing 10 is a flow chart which shows the outline of display processing of a page. If a user accesses the offer-of-information server 1 (S1:YES)this user will be shown a public page first (S2). A public page is the page or page group which displays the contents wide opened by all the persons as above-mentioned. The login part for a user to log in is provided in the public area in a public page.

[0083]If a user enters a user name and a password and logs in (S3:YES)it will be judged whether you are a regular registered user (S4). An error message is displayed when it is not a registered user (S5). But in a login surveillance stepit may be made to judge whether you are a registered userand S4 and S5 are contained and performed in S3 in that case.

[0084]When the user who accessed is a registered userthe user page only for (S4:YES) and its user is displayed (S6). Since the annunciator part 34 for changing a page (page group) is always displayed in the menu area which constitutes public area as shown in drawing 3the user can move to a desired page by operating an annunciator part (S7). When a public page is chosenit returns to a public page (S8)and when a user page is succeedingly displayed when a user page is chosenand (S9) and a group page are chosenit moves to one or more group pages to which a user belongs (S10). The composition of a page is grasped with reference to each data tableand drawing and a display of

each page are performed by displaying each object (contents) matched with the controller by a position as mentioned above with drawing 4.

[0085]Drawing 11 is a flow chart which shows the layout change processing by each button.When it judges whether it was operated or not about each button (S21S23S25S27S29S31) and a button is operatedoperation according to each button is performed (S22S24S26S28S32). Contents can be edited now in the edit mode of S32 (selection change of line unit contentsetc.).

[0086]Drawing 12 is a flow chart which shows contents adding processing. When a user wants to add new contents to the group page which has its user page or change authoritya user operates the contents addition button 95 shown in drawing 3 (S41:YES).

[0087]When adding contentsa user inputs the specification information for specifying contentsincluding for examplethe link to contentsa patha contents nameetc.(S42). The offer-of-information server 1 will generate the new contents adapter 6if contents designation information is acquired client machine 20.

[0088]When the contents newly added require the basic authentication by an HTTP protocoletc.they generate the HTTP request for login included certification information based on the certification information (a user name and a password) which (S43:YES) and a user inputtedfor example (S44). That isthis offer-of-information server 1 executed authenticating processing to each contents by proxyand has realized what is called a single sign-on. A user can access the offer-of-information server 1can only log in to service of the offer-of-information server 1 onceand can use now two or more contents which require attestation.

[0089]Nextit is contents in which a sector display like a web page is possibleand when a user wishes the sector display of contents(S45:YES) and the contents adapter 6 access the specified contentsand acquire configuration information (S46). Based on the acquired configuration informationthe offer-of-information server 1 generates a line selection picturecarries out the list display of the partial contents of a line unitand waits for a user's selection (S47). If a user chooses desired contents out of each partial contents of a line unitthe contents of the

selected line will be acquired (S48) and it will be displayed on the contents indicator 70 (S49).

[0090]On the other handwhen the case of the contents in which a sector display is impossibleor a user does not desire a partial display(S45:NO) and the offer-of-information server 1 acquire the specified contents (S50)and are made to display them on the contents indicator 70 (S51).

[0091]The contents of the selected line are not acquiredbut the whole contents (contents aggregate) are acquiredand only the contents of the selected portion (line) can also be made to draw.

[0092]According to this embodiment constituted in this waythe following effects are done so.

[0093]Selectivelyit writes contents as a display is possibleand the user can choose only the portion for which it asks and it not only can display the whole contentsbut he can peruse information by the optimal organization for self. Since unnecessary contents can be eliminatedthe limited screen space can be used effectively.

[0094]Especially in the sources of information 10 to which renewal of information like a news web site is carried out frequentlyupdating operation is performed mechanically and it has the feature of arranging the contents it was decided for the reasons of raising working efficiency that would be the regular lines (printing position) in many cases. For examplethe top news in a top page is published by fixed placessuch as the upper right of a pageand a center sectionand is published by the "reserved seat" where contentssuch as a stock price and a weather reportalso became settled in many cases. Unless a large change of a page configurationetc. arisethe printing position is being fixed according to the attribute of information. And sources of information with higher update frequency have that it is [more] useful for a user.

[0095]The new composition of changing a display / un-displaying of information per line (locating position of information) with the composition by which the source of useful information with higher importance was standardized paying

attention to the feature of providing information in many cases is used for this invention. Therebyeach user can obtain only desired information easily.

[0096]A layout can be changed seamlesslywithout interrupting a contents displayin order to provide the various control buttons for layout change in each contents indicator 70 grade in one. Since a layout can be easily changed by intuitive operationwithout passing a special programthe layout editing screen of another pageetc.user-friendliness improves.

[0097]Since area and a controller were formed and hierarchized in the page and the mistake in area and the arranging direction of a controller is madelayout change in an area unit and a layout change in a controller unit can be made. Thereforea layout can be dynamically changed per an area unit or controlleror a delicate layout change can also be made by 70 units of contents indicators. By hierarchizing the layout in a pagea program can also be simplified and high-speed layout change processing can be performed. Namelyif the concept of area or a controller is abolished. [that it is necessary to provide the go button to all the directions in each contents indicator 70and] When movement magnitude is largea go button must be operated repeatedlyand the offer-of-information server 1 needs to rewrite layout information at every time. By introducing area and a controller in a pageoperativity is improved substantially.

[0098]When the layout editing button 97 is operated without always displayingarea actualizes existence of areawrites layout change as it is possiblecannot make a user conscious of existence of areaand can use the limited screen space effectively.

[0099]Nexta 2nd embodiment of this invention is described based on drawing 13 and drawing 14. In the following explanationthe same numerals shall be given to the same component as the component mentioned aboveand the explanation shall be omitted. The feature of this embodiment is that accesses the offer-of-information server 1 from the client to which inspection environment (screen sizea bit rateetc.) was restricted like the Personal Digital Assistantand it peruses information.

[0100]As shown in the screen constitution 30Ain this embodimentthe place-where-one-has-gone contents selection button 101 for choosing the contents which wish the inspection by a place where one has gone is formed. A user operates the selection button 101 before going out. Operation of the selection button 101 will display the selection box 101 for every contentsrespectively. That isthe selection box 101 is displayed about each of the contents indicator 70 and the partial contents currently displayed.

[0101]A user chooses the contents which wish the inspection by a place where one has gone by operating the selection box 101. This contents selection information is stored in an object data table for every contents. Only preselected contents will be displayed if a user accesses the offer-of-information site 1 with the client machine 20A like a Personal Digital Assistant from a place where one has gone.

[0102]When the offer-of-information server 1 is accessed from a place where one has gonemore specificallypreselected contents are rewritten and provided in real time with the languages for Personal Digital Assistants (for exampleCHTMLHDMLetc.). This contents conversion is performed by the conversion program mounted in the offer-of-information server 1.

[0103]here -- being careful -- even when place-where-one-has-gone contents are chosenthey are the point of not giving change at all to the composition of a user page or the group page itselfand a point which is not independently necessarily preparing the user page or group page for places where one has gone. When the attribution information for places where one has gone (for mobile) is only added to each object (contents) of every and it is accessed from the usual client machine 20the usual user page etc. are displayed.

[0104]Drawing 14 is a flow chart which shows an operation of this embodiment. Firsta user's operation of the place-where-one-has-gone contents selection button 101 will display the selection box (check box) 100 on each contents (S62). (S61) A user chooses desired contents by marking the selection box 100 (S63). After selection of contents is completed (S64:YES)the offer-of-information server

1 marks selected contentsand updates the contents of the object data table (S65).

[0105]A public page will be displayed if a user accesses the offer-of-information server 1 from a place where one has gone (S66:YES) (S67). Herewhen the link to the public page for places where one has gone can also be set up in the top area and menu area in the usual public page or access is analyzedthe public page for places where one has gone can also be displayed automatically.

[0106]And when a user logs init is judged whether they are (S68:YES) and access from a place where one has gone (S69). As mentioned abovewhen the user himself operates the link to the public page for places where one has goneit can judge with it being access from a place where one has gone. Or it is also possible to deduce a remote host name from an IP addressand to judge whether it is access from a place where one has gone.

[0107]When it is access from a place where one has gonecontents selected by S63 are rewritten in an available language with Personal Digital Assistantssuch as CHTMLthe page for places where one has gone is generatedand it provides for a user (S70). On the other handwhen it is not access from a place where one has gonethe usual page is generated and it provides for a user (S71).

[0108]When rewriting contents to places where one has gonehere it not only rewrites the sauce of contents to CHTML (Compact HTML) from HTMLor HDML (HyperText Device Markup Language)butIt may be made to perform processing of otherssuch as subtractive color processing.

[0109]Even when the offer-of-information server 1 is accessed with the client machine 20A which has a limit in inspection environment like a Personal Digital Assistant according to this embodiment constituted in this waydesired information can be perused easily.

[0110]Nextbased on drawing 15an example concrete about the important section of the offer-of-information server 1 is explained briefly. This invention is not limited to this example.

[0111]Drawing 15 is an explanatory view showing roughly the relation of each object which constitutes the informational service by the offer-of-information

server 1.

[0112]The object is divided roughly into the user management object group 200the public field management object group 210and the page control object group 220 so that it may mention laterrespectively.

[0113]The user management object group 200 is provided with the following.

Guest User Information object 201.

User Information object 202.

Group information object 203.

The guest User Information object 201 manages the ID list of the page which a guest holds. The User Information object 202 manages the ID list of the page which each user holds. The group information object 203 manages the ID list of the page which each group holds. The page environment management object 204 determines and manages the page environment with which an access person is provided based on the information passed from each objects 201-203.

[0114]The public field management object 210 is provided with the following.

Public area object 211.

Public controller management object 212.

Public area adapter tube ** object 213.

The public area object 211 manages the arrangement information (layout information) of the controller of top areaand the controller of a menu area which constitutes public area. The public controller management object 212 manages all the controller objects belonging to public area. The public area adapter tube ** object 213 manages all the contents adapters 6 (the contents indicator 70 is included) belonging to public area.

[0115]The page control object group 220 has the page object 221the controller management object 222and the adapter tube ** object 223. The page object 221 manages the arrangement information of all the area which exists in a pageand controllers. The controller management object 222 manages all the controller objects in a page. The adapter tube ** object 223 manages all the contents adapters 6 (the contents indicator 70 is included) in a page.

[0116]Determination of the classification (the public pagethe user pagethe group page) and page ID of a page which should be displayed based on User Information will generate the public area object 211 and the page object 221 which manage layout informationrespectively. If a drawing method is performed to the public area object 211 and the page object 221respectivelythe contents which each manages will be outputted. Actual contents drawing is left to the controller management object 222 or the adapter tube ** object 223.

[0117]This invention is not limited to each embodiment mentioned above. If it is a person skilled in the artvarious modification can be performed by addingdeleting or changing a component into said embodiment. For examplesince the flow chart of a graphic display is only what showed the flow of processing directly so that an understanding and implementation of an invention may not be spoiledif it is a person skilled in the arteasilyexchange of a step and it can make deletionchangeetc.

[0118]The composition of partial selection and a display of the contents described with drawing 6 etc. can be expressed as followsfor examplecan generate the offer-of-information screen which fitted each user by combining with the composition concerning layout change organicallyand can change a layout now easily.

[0119]

[Effect of the Invention]According to the information service system concerning this inventioninformation can be chosen selectivelyand can be displayed and each user can compose the contents of an information display freely as explained above.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is an explanatory view showing the entire configuration of the

information service system concerning an embodiment of the invention.

[Drawing 2]It is an explanatory view showing the screen constitution of a client side.

[Drawing 3]It is an explanatory view showing the details of screen constitution.

[Drawing 4]It is an explanatory view showing each data table memorized by the management data baseand as for drawing 4 (a)the User Information table and drawing 4 (b) show a page data tabledrawing 4 (c) shows a controller data tableand drawing 4 (d) shows an object data tablerespectively.

[Drawing 5]It is an explanatory view showing the composition of the attestation data table memorized by the management data base.

[Drawing 6]It is an explanatory view showing how to choose contents selectively per line etc. and display them.

[Drawing 7]It is an explanatory view showing the situation of layout change of a contents indicatorand drawing 7 (a) shows the state before layout changeand drawing 7 (b) shows the state after layout changerespectively.

[Drawing 8]It is an explanatory view showing the situation of layout change of a controllerand drawing 8 (a) shows the state before layout changeand drawing 8 (b) shows the state after layout changerespectively.

[Drawing 9]It is an explanatory view in the case of changing the layout of areaand drawing 9 (a) shows the state where area and various buttons are displayed in the state where area and various buttons are hidden as for drawing 9 (b)respectively.

[Drawing 10]It is a flow chart which shows display processing.

[Drawing 11]It is a flow chart which shows the layout change processing by a control button.

[Drawing 12]It is a flow chart which shows contents adding processing.

[Drawing 13]It is an explanatory view showing the important section of the information service system concerning a 2nd embodiment of this invention.

[Drawing 14]It is a flow chart which shows the processing in the case of perusing information with a Personal Digital Assistant etc.

[Drawing 15]It is an explanatory view showing a concrete example of the composition of this invention.

[Description of Notations]

1 Offer-of-information server

2 Whole Management Department

3 Page control department

4 Area Management Department

5 Controller Management Department

6 Contents adapter

7 Management data base

10 Sources of information

20 Client machine

21 Client program

30 Screen constitution

31 Top area

32 Menu area

41 Page

51 Area

61 Controller

70 Contents indicator

81 Disappearance button

82 Lower go button

83 Upper go button

84 Right translation button

85 Left translation button

86 Help button

87 Edit button

91 Page addition button

92 Page deletion button

93 Area addition button

94 Controller addition button
95 Contents addition button